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INTERNATIONAL COMPARISONS OF MANUFACTURING PRODUCTIVITY AND LABOR COST TRENDS, 1988

The growth rate in U.S. manufacturing labor productivity (output per hour) from 1987 to 1988 was 3.2 percent. This performance, however, was matched or exceeded by six other industrial countries studied, according to measures released today by the Bureau of Labor Statistics of the U.S. Department of Labor.

The U.S. recorded a slight increase in unit labor costs in manufacturing. In contrast, Japan and several other countries had decreasing unit labor costs during this period. Adjusted for changes in foreign currency values relative to the U.S. dollar, however, all but France of the foreign economies studied had unit labor cost increases which exceeded the U.S. rate.

The Bureau's comparative annual measures of percent changes from 1987 to 1988 in manufacturing productivity, unit labor costs, and related variables for the United States, Canada, Japan, and seven European countries are summarized in table A. Table A also shows percent changes in unit labor costs for Korea and Taiwan, but comparable productivity figures are not available because adequate labor input measures have not been developed. Table 1 shows annual average percent changes for selected periods from 1960 for 14 countries or areas, which include Belgium and Norway in addition to the 12 discussed in this release. Indexes of the measures for the 14 economies are included at the end of the release.

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Table A. Manufacturing productivity 1/ and labor costs in 12 countries
Percent change, 1987-88

Country	Output per hour	Output	Hours	Employment	Average hours	Hourly compensation	Unit labor costs		Exchange rate 2/
							National currency	U.S. dollars	
United States	3.2	6.1	2.8	2.6	0.2	3.5	.3	.3	-
Canada	3.2	5.8	2.6	1.1	1.5	6.2	2.9	10.9	7.7
Japan	7.6	11.3	3.4	2.5	.9	5.4	-2.1	10.5	12.8
Korea	-	13.0	-	-	-	-	-1.1	11.2	12.5
Taiwan	-	3.5	-	-	-	-	5.5	17.0	10.9
Denmark	.0	-2.3	-2.3	-2.5	.3	1.8	1.8	3.4	1.6
France	5.3	3.8	-1.4	-1.8	.4	3.6	-1.6	-.8	.9
Germany	4.6	4.2	- .4	- .1	- .3	4.1	- .5	1.8	2.3
Italy	2.9	5.8	2.8	.0	2.8	6.4	3.4	2.9	- .4
Netherlands	5.0	4.3	- .7	- .2	- .4	3.5	-1.4	1.0	2.5
Sweden	2.3	4.0	1.7	.8	.9	6.7	4.3	7.9	3.4
United Kingdom	4.9	7.0	2.0	1.3	.7	8.0	2.9	11.8	8.6

1/ Although the productivity measure relates output to the hours of persons employed in manufacturing, it does not measure the specific contributions of labor as a single factor of production. Rather, it reflects the joint effects of many influences, including new technology, capital investment, capacity utilization, energy use, and managerial skills, as well as the skills and efforts of the work force.

2/ Value of foreign currency relative to the U.S. dollar.

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Productivity, output, and employment

The U.S. increase in manufacturing productivity of 3.2 percent from 1987 to 1988 was only slightly below the gains recorded from 1986 to 1987 and from 1985 to 1986. The 1988 increase was exceeded by Japan (about 7-1/2 percent) and France, Germany, the Netherlands, and the United Kingdom (all about 5 percent). Canada's growth rate was the same as the United States, while Italy and Sweden had smaller gains. Denmark had no productivity growth in 1988. While all countries covered have had productivity slowdowns since 1973, the United States and the United Kingdom remain the only two countries which have increased their productivity growth enough since 1979 to match or surpass their pre-1973 trend rates.

Manufacturing output fell in Denmark in 1988, but rose in the other 11 economies covered. Japan and Korea far outdistanced all the other economies. Their rates of growth were followed by the United Kingdom, the United States, Canada, and Italy.

The United States and Japan had strong manufacturing employment growth in 1988 of about 2-1/2 percent. Canada, Sweden, and the United Kingdom also experienced gains, although Canada's increase was well below the increases recorded in the previous 4 years. The growth in the United Kingdom marks the first time in 11 years that manufacturing employment has not declined. Manufacturing employment in France continued its decline for the 14th consecutive year. Denmark experienced a decline for the second consecutive year, while employment in Germany, Italy, and the Netherlands was about unchanged.

In 1988, U.S. manufacturing employment was 18-1/2 percent of total civilian employment. In 1973, it was nearly 25 percent. Since 1973, manufacturing's share of employment has also fallen in Canada, Japan, and Europe, while rising in Korea and Taiwan. The following tabulation shows employment in manufacturing as a percent of total civilian employment in 1973 and in 1988:

	1973	1988
United States	24.8	18.5
Canada	22.0	17.2
Japan	27.1	23.7
Korea	15.9	27.7
Taiwan	26.6	34.5
Denmark	24.3	20.7
France	27.9	21.0
Germany	37.4	32.4
Italy[1]	27.8	22.2
Netherlands[1]	25.4	19.6
Sweden	25.7	20.3
United Kingdom	31.7	21.3

[1]Full-time equivalents.

Japan had the largest increase in total employee hours in manufacturing, followed by the United States, Italy, and Canada. Denmark had the largest decline, although the decrease was only half as much as in 1987. The large decrease in 1987 was caused by employment cutbacks coupled with a one-hour reduction of the workweek (part of a two-stage working time reduction that will lead to a 37-hour working week in manufacturing in 1990).

Hourly compensation and unit labor costs

Hourly compensation in manufacturing -- which includes wages and salaries, supplements, and employer payments for social security and other employer-financed benefit plans -- rose 3.5 percent in the United States from 1987 to 1988. While this was higher than the previous year's increase, only Denmark had a smaller increase. France and the Netherlands matched the U.S. rate. The gains recorded in the other countries ranged from 4 to 8 percent, with the United Kingdom registering the largest increase.

Manufacturing unit labor costs, which reflect changes in both labor productivity and hourly compensation, rose only 0.3 percent in the United States from 1987 to 1988, representing the continuation of a trend of moderate increases or declines since the early 1980s. However, 5 of the 11 other economies studied had reductions in unit labor costs between 1987 and 1988. Japan, with strong productivity growth, had a decline of about 2 percent. France, Germany, the Netherlands, and Korea recorded smaller declines. Unit labor costs rose about 2 to 4-1/2 percent in Canada, Denmark, Italy, Sweden, and the United Kingdom and 5-1/2 percent in Taiwan.

Unit labor costs in U.S. dollars

The currencies of all of the foreign economies except Italy appreciated relative to the U.S. dollar in 1988. For the continental European countries, the appreciations were about 1 to 3-1/2 percent -- far less than in either of the preceding 2 years. Therefore, the differences in unit labor cost growth rates measured in national currencies and in U.S. dollars were less dramatic in 1988 than they were in 1986 and 1987. However, the currencies of Canada, Japan, Korea, Taiwan, and the United Kingdom continued to appreciate substantially in 1988. The Japanese yen rose 13 percent, nearly as much as its 1987 increase. The Korean won's appreciation of 12-1/2 percent and the Canadian dollar's increase of nearly 8 percent were higher than the 1987 increases. The Taiwanese dollar and British pound rose less than in 1987, but still appreciated 11 percent and 8-1/2 percent respectively.

The countries or areas whose currencies had substantial appreciation relative to the U.S. dollar had large increases in unit labor costs measured in U.S. dollars between 1987 and 1988. While Japanese unit labor costs measured in yen fell 2 percent between 1987 and 1988, they rose 10-1/2 percent when measured in U.S. dollars. Adjusted for exchange rate changes, unit labor costs rose 17 percent in Taiwan and 11 to 12 percent in Canada, Korea, and the United Kingdom. Increases in unit labor costs in U.S. dollars for the other economies tended to be more moderate, although Sweden had an increase of 8 percent. Denmark, Germany, Italy, and the Netherlands had increases of 1 to 3-1/2 percent. France, with a drop of about 1 percent, was the only country experiencing a decline in unit labor costs measured in U.S. dollars.

Trade-weighted unit labor costs

The countries covered by the Bureau's comparative measures differ greatly in their relative importance to U.S. trade in manufactured goods. Therefore, the Bureau constructs two summary measures: a "competitors" index, which is the trade-weighted geometric average of the indexes for the other competitors, and a relative index, which is the ratio of the U.S. index to the "competitors" index. Chart 1 shows U.S. relative unit labor cost indexes on both a national currency and U.S. dollar basis over the 1973-88 period. The U.S. indexes are shown relative to Korea, Taiwan, and the 9 industrial countries for which 1988 measures are available. (The exclusion of Belgium and Norway has little effect because of their small weight.)

As the chart shows, U.S. relative unit labor costs, unadjusted for exchange rate changes, fell from 1973 to 1977, rose moderately from 1977 to 1982, and then fell again from 1982 to 1988. As of 1988, U.S. relative unit labor costs were down 19 percent from 1973.

This pattern was greatly altered by relative changes in exchange rates. Measured on a U.S. dollar basis, U.S. relative unit labor costs were down 15 percent from 1973 as of 1979, up 15 percent from 1973 as of 1985, and down about 27 percent from 1973 as of 1988.

Recent exchange rate changes

As of the end of 1988, the value of the Korean won was up 7 percent, and the currencies of Canada and Japan were up 3-4 percent compared with the annual average exchange rates used to construct the measures in this release. The currencies of Taiwan and the European countries were about unchanged.

During the first half of 1989, only the Korean won and the Taiwanese dollar continued to appreciate relative to the U.S. dollar. In contrast, the Japanese yen and the European currencies declined substantially. Recent exchange rate changes have been quite volatile, but, as of June 27, while the Korean won and the Taiwanese dollar were up 10-11 percent over their annual average 1988 values and the Canadian dollar was up 3 percent, the values of the Japanese yen and the European currencies were down 7-12 percent. This puts the yen nearly back to its 1987 annual average value and the European currencies about 4 to 10 percent below their 1987 values. Consequently, while the competitiveness of U.S. manufacturing generally improved in 1988 -- as measured by relative changes in unit labor costs -- this trend will be largely negated by the subsequent changes in exchange rates, unless there are offsetting movements in unit labor costs.

Chart 1. U.S. manufacturing unit labor costs relative to 11 competitors, 1973-88

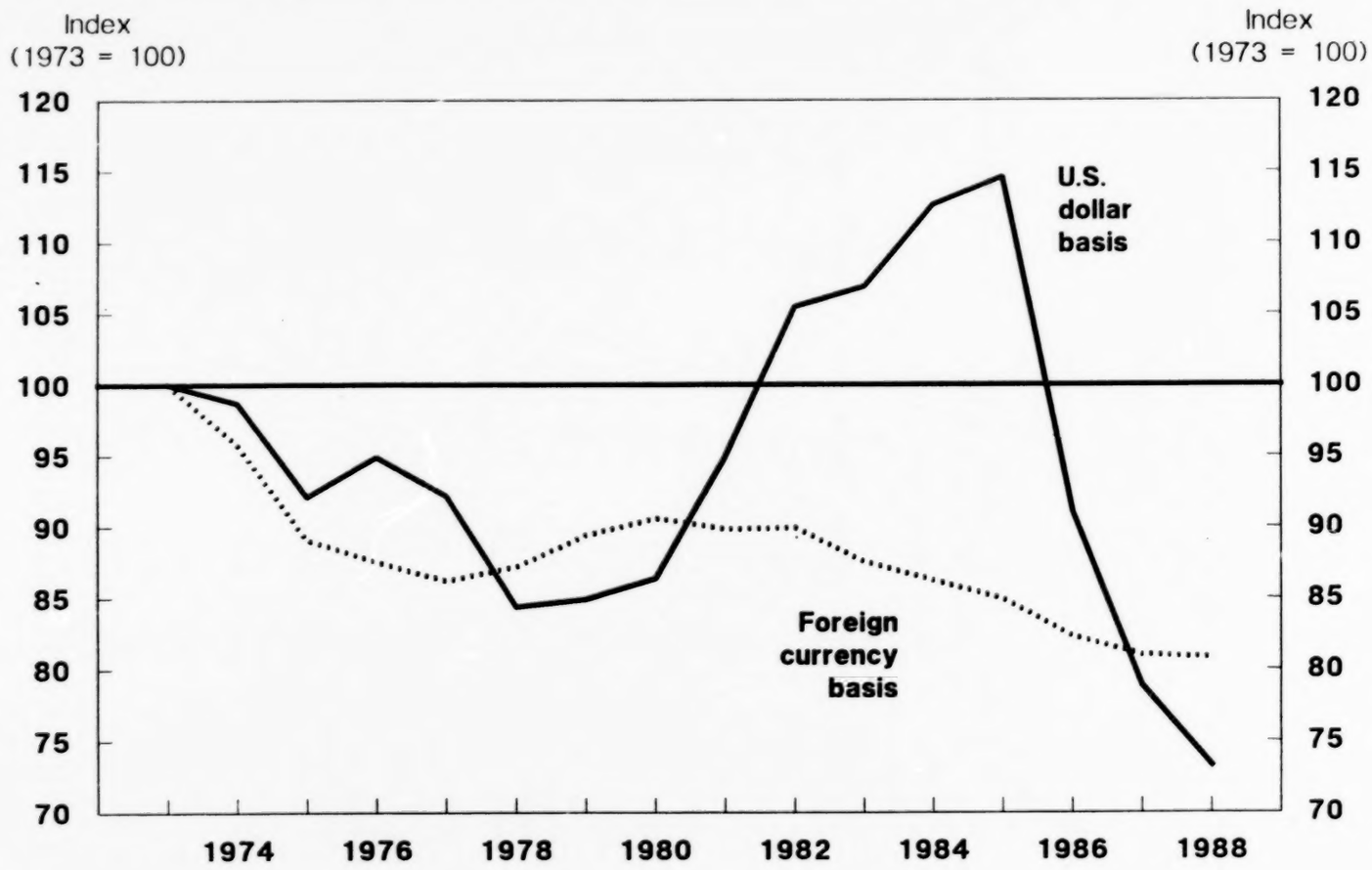

TABLE 1.

OUTPUT PER HOUR, HOURLY COMPENSATION, UNIT LABOR COSTS, AND RELATED MEASURES
MANUFACTURING, 14 COUNTRIES OR AREAS, 1960-1988

AVERAGE ANNUAL RATES OF CHANGE (1)

COUNTRY OR AREA	1960-88 (2)	1960-73	1973-88 (2)	1973-79	1979-88 (2)	1979-86	1987	1988
OUTPUT PER HOUR								
UNITED STATES	2.8	3.2	2.5	1.4	3.3	3.3	3.4	3.2
CANADA	3.3	4.5	2.2	2.1	2.2	2.1	2.4	3.2
JAPAN	7.8	10.3	5.7	5.5	5.8	5.2	7.8	7.6
KOREA	NA	NA	NA	NA	NA	NA	NA	NA
TAIWAN	NA	NA	NA	NA	NA	NA	NA	NA
BELGIUM	6.3	6.9	5.7	6.0	5.4	5.6	3.7	NA
DENMARK	4.2	6.4	2.3	4.2	1.1	1.3	.9	.0
FRANCE	4.9	6.4	3.7	4.6	3.1	3.0	1.2	5.3
GERMANY	4.4	5.8	3.3	4.3	2.6	2.5	1.3	4.6
ITALY	5.5	6.4	4.7	5.7	4.1	4.5	2.5	2.9
NETHERLANDS	5.7	7.4	4.3	5.5	3.5	3.7	.8	5.0
NORWAY	3.4	4.3	2.4	2.2	2.6	2.3	5.0	NA
SWEDEN	4.5	6.4	2.9	2.6	3.0	3.0	4.3	2.3
UNITED KINGDOM	3.7	4.2	3.3	1.2	4.7	4.4	6.4	4.9

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TABLE 1-CONTINUED

OUTPUT PER HOUR, HOURLY COMPENSATION, UNIT LABOR COSTS, AND RELATED MEASURES
MANUFACTURING, 14 COUNTRIES OR AREAS, 1960-1988

AVERAGE ANNUAL RATES OF CHANGE (1)

COUNTRY OR AREA	1960-88 (2)	1960-73	1973-88 (2)	1973-79	1979-88 (2)	1979-86	1987	1988
				OUTPUT				
UNITED STATES	3.5	4.8	2.4	1.9	2.8	2.1	4.3	6.1
CANADA	4.4	6.5	2.5	2.5	2.5	1.7	5.4	5.8
JAPAN	9.0	12.8	5.7	3.6	7.2	6.6	7.3	11.3
KOREA	NA	NA	13.5	16.5	11.5	10.3	18.3	13.0
TAIWAN	NA	NA	9.3	9.9	8.9	9.0	14.5	3.5
BELGIUM	4.1	6.6	1.8	1.3	2.1	2.2	1.6	NA
DENMARK	3.2	5.3	1.4	1.6	1.3	2.6	-3.8	-2.3
FRANCE	3.9	7.2	1.0	2.6	.0	- .3	-1.0	3.8
GERMANY	3.1	5.2	1.3	1.7	1.0	.6	.7	4.2
ITALY	5.4	7.4	3.8	5.6	2.6	1.9	4.1	5.8
NETHERLANDS	3.7	6.0	1.7	1.7	1.7	1.5	.5	4.3
NORWAY	2.6	4.7	.6	.2	.9	.9	1.3	NA
SWEDEN	3.1	5.1	1.4	.5	2.0	1.5	4.0	4.0
UNITED KINGDOM	1.5	3.0	.2	- .7	.8	- .7	5.6	7.0
				TOTAL HOURS				
UNITED STATES	0.7	1.6	-0.1	0.5	-0.5	-1.2	0.9	2.8
CANADA	1.1	1.9	.4	.4	.3	- .4	3.0	2.6
JAPAN	1.1	2.3	.1	-1.8	1.3	1.3	- .5	3.4
KOREA	NA	NA	NA	NA	NA	NA	NA	NA
TAIWAN	NA	NA	NA	NA	NA	NA	NA	NA
BELGIUM	-2.1	- .3	-3.7	-4.5	-3.1	-3.2	-2.0	NA
DENMARK	-1.0	-1.1	- .9	-2.5	.2	1.3	-4.6	-2.3
FRANCE	-1.0	.8	-2.5	-1.9	-2.9	-3.3	-2.1	-1.4
GERMANY	-1.3	- .6	-1.9	-2.5	-1.6	-1.9	- .6	- .4
ITALY	- .1	.9	- .9	- .1	-1.5	-2.5	1.5	2.8
NETHERLANDS	-1.9	-1.2	-2.5	-3.6	-1.7	-2.1	- .3	- .7
NORWAY	- .8	.3	-1.8	-1.9	-1.7	-1.4	-3.5	NA
SWEDEN	-1.3	-1.2	-1.4	-2.0	-1.0	-1.5	- .3	1.7
UNITED KINGDOM	-2.1	-1.1	-3.0	-1.9	-3.7	-4.9	- .7	2.0

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OUTPUT PER HOUR, HOURLY COMPENSATION, UNIT LABOR COSTS, AND RELATED MEASURES
MANUFACTURING, 14 COUNTRIES OR AREAS, 1960-1988

AVERAGE ANNUAL RATES OF CHANGE (1)

COUNTRY OR AREA	1960-88 (2)	1960-73	1973-88 (2)	1973-79	1979-88 (2)	1979-86	1987	1988
			EMPLOYMENT					
UNITED STATES	0.5	1.4	-0.2	0.8	-0.8	-1.4	0.4	2.6
CANADA	1.1	2.0	.4	.8	.1	- .3	2.3	1.1
JAPAN	1.6	3.3	.1	-1.5	1.2	1.4	-1.0	2.5
KOREA	NA	NA	NA	NA	NA	NA	NA	NA
TAIWAN	NA	NA	NA	NA	NA	NA	NA	NA
BELGIUM	-1.1	.8	-2.9	-3.4	-2.5	-2.6	-2.4	NA
DENMARK	- .1	.5	- .6	-2.0	.4	1.2	-2.4	-2.5
FRANCE	- .4	1.3	-1.8	-1.0	-2.3	-2.3	-2.7	-1.8
GERMANY	- .4	.4	-1.2	-1.6	- .9	-1.1	.0	- .1
ITALY	.3	1.7	- .9	1.0	-2.1	-2.7	- .3	.0
NETHERLANDS	- .8	.1	-1.6	-2.3	-1.1	-1.5	.7	- .2
NORWAY	.1	1.3	-1.0	- .2	-1.5	-1.5	-2.0	NA
SWEDEN	- .4	.1	- .7	- .5	- .9	-1.2	.0	.8
UNITED KINGDOM	-1.7	- .5	-2.7	-1.4	-3.5	-4.5	-1.4	1.3
			AVERAGE HOURS					
UNITED STATES	0.1	0.2	0.0	-0.2	0.2	0.2	0.5	0.2
CANADA	- .1	- .1	.0	- .4	.2	- .1	.6	1.5
JAPAN	- .5	-1.0	- .1	- .3	.1	- .1	.5	.9
KOREA	NA	NA	NA	NA	NA	NA	NA	NA
TAIWAN	NA	NA	NA	NA	NA	NA	NA	NA
BELGIUM	- .9	-1.1	- .8	-1.1	- .6	- .7	.4	NA
DENMARK	- .9	-1.6	- .3	- .5	- .1	.1	-2.3	.3
FRANCE	- .6	- .5	- .8	-1.0	- .6	- .9	.6	.4
GERMANY	- .9	-1.0	- .8	- .9	- .7	- .7	- .6	- .3
ITALY	- .4	- .7	.0	-1.1	.7	.2	1.8	2.8
NETHERLANDS	-1.1	-1.3	- .9	-1.3	- .6	- .6	-1.0	- .4
NORWAY	- .9	-1.0	- .8	-1.7	- .1	.1	-1.6	NA
SWEDEN	-1.0	-1.3	- .7	-1.6	- .1	- .2	- .3	.9
UNITED KINGDOM	- .5	- .7	- .3	- .5	- .2	- .4	.6	.7

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OUTPUT PER HOUR, HOURLY COMPENSATION, UNIT LABOR COSTS, AND RELATED MEASURES
MANUFACTURING, 14 COUNTRIES OR AREAS, 1960-1988

AVERAGE ANNUAL RATES OF CHANGE (1)

COUNTRY OR AREA	1960-88 (2)	1960-73	1973-88 (2)	1973-79	1979-88 (2)	1979-86	1987	1988
HOURLY COMPENSATION(3): NATIONAL CURRENCY BASIS								
UNITED STATES	6.1	5.0	7.1	9.5	5.6	6.4	2.1	3.5
CANADA	7.8	6.2	9.3	12.0	7.5	8.0	5.2	6.2
JAPAN	11.1	15.1	7.9	12.8	4.7	4.9	2.3	5.4
KOREA	NA	NA	NA	NA	NA	NA	NA	NA
TAIWAN	NA	NA	NA	NA	NA	NA	NA	NA
BELGIUM	10.3	11.0	9.7	14.0	6.5	7.2	2.0	NA
DENMARK	10.9	12.2	9.9	14.0	7.2	7.4	11.1	1.8
FRANCE	11.3	10.0	12.5	16.3	10.0	11.7	4.6	3.6
GERMANY	8.5	10.3	7.0	9.5	5.3	5.7	3.9	4.1
ITALY	14.6	12.3	16.7	22.5	12.9	14.8	6.5	6.4
NETHERLANDS	9.8	12.9	7.2	11.6	4.4	4.8	3.0	3.5
NORWAY	10.9	10.0	11.7	13.4	10.5	9.9	14.8	NA
SWEDEN	10.8	10.5	11.1	14.2	9.0	9.6	7.0	6.7
UNITED KINGDOM	11.5	9.2	13.5	19.4	9.7	10.4	6.4	8.0
HOURLY COMPENSATION(3): U.S. DOLLAR BASIS								
UNITED STATES	6.1	5.0	7.1	9.5	5.6	6.4	2.1	3.5
CANADA	6.9	5.9	7.8	9.1	6.9	5.4	10.2	14.4
JAPAN	15.3	17.6	13.4	16.9	11.1	8.9	19.1	18.9
KOREA	NA	NA	NA	NA	NA	NA	NA	NA
TAIWAN	NA	NA	NA	NA	NA	NA	NA	NA
BELGIUM	11.5	13.2	10.0	19.5	3.4	.9	22.0	NA
DENMARK	11.0	13.4	9.0	16.6	4.3	1.0	31.3	3.4
FRANCE	10.5	10.9	10.3	17.1	5.9	4.2	20.4	4.5
GERMANY	11.9	14.3	9.9	16.4	5.8	3.2	25.4	6.5
ITALY	11.6	12.8	10.6	15.4	7.4	5.6	22.4	6.0
NETHERLANDS	12.4	15.6	9.7	17.8	4.6	1.8	24.5	6.0
NORWAY	11.1	11.8	10.5	15.8	6.6	3.7	29.5	NA
SWEDEN	10.1	12.0	8.5	14.5	4.7	2.0	20.2	10.3
UNITED KINGDOM	9.7	8.1	11.1	16.6	7.6	4.7	18.9	17.3

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MANUFACTURING, 14 COUNTRIES OR AREAS, 1960-1988

AVERAGE ANNUAL RATES OF CHANGE (1)

COUNTRY OR AREA	1960-88 (2)	1960-73	1973-88 (2)	1973-79	1979-88 (2)	1979-86	1987	1988
UNIT LABOR COSTS: NATIONAL CURRENCY BASIS								
UNITED STATES	3.2	1.8	4.5	8.0	2.2	2.9	-1.2	0.3
CANADA	4.4	1.6	7.0	9.8	5.2	5.8	2.7	2.9
JAPAN	3.1	4.3	2.1	6.9	-1.0	- .3	-5.1	-2.1
KOREA	NA	NA	11.3	20.2	5.7	6.8	4.9	-1.1
TAIWAN	NA	NA	7.5	11.4	5.1	5.6	.9	5.5
BELGIUM	3.8	3.8	3.8	7.5	1.1	1.5	-1.6	NA
DENMARK	6.5	5.5	7.4	9.4	6.1	6.1	10.1	1.8
FRANCE	6.1	3.4	8.5	11.2	6.7	8.4	3.3	-1.6
GERMANY	3.9	4.3	3.6	4.9	2.7	3.2	2.6	- .5
ITALY	8.6	5.5	11.4	15.9	8.5	9.9	3.8	3.4
NETHERLANDS	3.9	5.2	2.8	5.8	.9	1.0	2.2	-1.4
NORWAY	7.3	5.4	9.1	11.0	7.6	7.4	9.3	NA
SWEDEN	6.0	3.9	7.9	11.2	5.8	6.5	2.6	4.3
UNITED KINGDOM	7.5	4.8	9.9	18.0	4.8	5.7	.0	2.9
UNIT LABOR COSTS: U.S. DOLLAR BASIS								
UNITED STATES	3.2	1.8	4.5	8.0	2.2	2.9	-1.2	0.3
CANADA	3.6	1.3	5.5	6.9	4.6	3.3	7.7	10.9
JAPAN	7.0	6.6	7.3	10.8	5.0	3.5	10.4	10.5
KOREA	NA	NA	6.9	16.4	1.0	-1.9	12.4	11.2
TAIWAN	NA	NA	9.6	12.5	7.8	4.9	20.2	17.0
BELGIUM	4.9	5.8	4.1	12.7	-1.9	-4.5	17.7	NA
DENMARK	6.6	6.6	6.6	11.9	3.2	- .2	30.1	3.4
FRANCE	5.3	4.2	6.4	12.0	2.8	1.1	19.0	- .8
GERMANY	7.2	8.0	6.5	11.6	3.2	.7	23.8	1.8
ITALY	5.8	6.0	5.6	9.2	3.2	1.1	19.4	2.9
NETHERLANDS	6.3	7.7	5.2	11.7	1.1	-1.8	23.5	1.0
NORWAY	7.5	7.2	7.8	13.3	3.9	1.3	23.3	NA
SWEDEN	5.4	5.3	5.5	11.5	1.7	-1.0	15.3	7.9
UNITED KINGDOM	5.8	3.7	7.6	15.2	2.7	.3	11.7	11.8

NA = NOT AVAILABLE.

(1) RATES OF CHANGE BASED ON THE COMPOUND RATE METHOD.

(2) FOR BELGIUM AND NORWAY, DATA RELATE TO PERIOD ENDING IN 1987.

(3) ADJUSTED TO INCLUDE EMPLOYMENT TAXES THAT ARE NOT COMPENSATION TO EMPLOYEES, BUT ARE LABOR COSTS TO EMPLOYERS.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

OUTPUT PER HOUR IN MANUFACTURING, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN	UNITED KINGDOM
1950	51.1	34.9	9.4		28.1	23.1	19.3	21.3	20.4	38.9	30.2	45.6
1955	58.7	42.8	15.9		30.6	28.8	27.8	29.7	25.5	43.2	33.1	49.3
1960	62.2	50.7	23.2	33.0	37.2	37.4	40.3	37.2	32.4	54.3	42.3	55.9
1961	64.0	53.4	26.3	33.4	39.3	39.6	42.2	40.2	34.1	56.0	44.3	56.0
1962	66.7	57.2	27.4	35.2	41.3	42.0	45.1	44.5	35.2	56.0	47.6	57.2
1963	71.2	59.3	29.6	36.5	42.6	44.0	47.0	45.7	36.4	57.7	50.4	60.2
1964	74.6	62.1	33.6	38.8	46.1	47.3	50.9	46.2	39.6	61.0	54.5	64.3
1965	76.6	65.0	35.0	40.8	48.4	50.5	54.0	51.4	42.1	64.1	58.5	66.2
1966	77.4	66.5	38.5	43.6	50.8	54.5	56.3	55.8	44.8	66.2	60.9	68.4
1967	77.4	67.7	44.2	46.1	54.5	57.8	60.1	58.6	47.9	69.2	65.9	71.6
1968	79.8	72.7	49.8	50.1	59.5	64.0	64.9	63.3	53.6	72.8	72.0	76.8
1969	80.8	76.6	57.5	54.7	61.9	67.6	69.1	65.6	58.7	79.5	77.4	78.7
1970	80.8	75.6	64.8	60.4	65.6	71.4	71.2	69.8	64.3	81.3	80.7	80.3
1971	85.3	80.9	68.6	64.0	70.0	75.3	74.0	71.1	67.7	84.1	84.1	84.2
1972	89.0	84.9	75.3	71.3	75.7	78.5	78.9	77.1	73.7	88.7	88.3	88.9
1973	93.4	90.3	83.1	78.8	83.3	83.8	84.0	83.4	81.5	94.4	94.8	95.4
1974	90.6	91.7	86.5	83.2	86.0	85.6	87.4	89.2	88.1	97.8	98.8	97.0
1975	92.9	88.6	87.7	86.5	94.6	88.7	90.1	86.2	86.2	97.7	100.2	94.9
1976	97.1	94.8	94.3	95.3	98.2	94.4	96.4	97.9	95.8	100.4	101.7	99.1
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	101.5	101.1	108.0	106.1	101.5	104.6	103.1	106.5	106.4	101.2	102.8	101.4
1979	101.4	102.0	114.8	112.0	106.5	109.7	108.2	116.6	112.3	107.4	110.9	102.5
1980	101.4	98.2	122.7	119.2	112.3	110.6	108.6	122.1	113.9	107.5	112.7	101.9
1981	103.6	102.9	127.2	127.6	114.2	113.9	111.0	125.4	116.9	108.0	113.2	107.1
1982	105.9	98.3	135.0	135.2	114.6	122.0	112.6	128.5	119.4	109.2	116.5	113.5
1983	112.0	105.4	142.3	148.1	120.2	125.1	119.2	135.3	127.9	117.2	125.5	123.1
1984	118.1	114.4	152.5	155.0	119.6	127.5	123.7	148.8	139.2	124.1	131.0	129.9
1985	123.6	117.3	161.1	158.6	120.3	132.7	128.4	156.8	145.1	126.8	136.1	134.1
1986	127.7	117.7	163.7	164.5	116.2	135.2	128.3	158.3	144.8	125.9	136.0	138.6
1987	132.0	120.5	176.5	170.5	117.2	136.8	129.9	162.3	145.9	132.2	141.8	147.6
1988	136.2	124.3	190.0		117.2	144.1	135.9	167.1	153.2		145.0	154.9

NOTE: THE DATA RELATE TO ALL EMPLOYED PERSONS (WAGE AND SALARY EARNERS, THE SELF-EMPLOYED, AND UNPAID FAMILY WORKERS) IN THE UNITED STATES AND CANADA, AND ALL EMPLOYEES (WAGE AND SALARY EARNERS) IN THE OTHER COUNTRIES.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

OUTPUT PER EMPLOYED PERSON IN MANUFACTURING, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN	UNITED KINGDOM
1950	51.3	37.7	10.2		37.8	26.0	25.4	23.9	25.3	49.0	40.1	51.2
1955	59.1	44.6	18.0		40.4	32.1	36.6	34.2	31.8	54.4	43.6	56.0
1960	61.4	52.4	27.4	40.6	46.6	41.9	47.8	43.3	40.8	65.8	52.8	62.3
1961	63.3	55.0	30.5	41.1	47.8	44.6	49.1	46.3	41.2	66.9	54.8	61.5
1962	66.6	59.5	31.1	43.3	50.6	47.2	51.1	49.7	42.1	66.6	58.4	62.2
1963	71.3	61.9	33.3	44.9	51.5	49.5	52.4	51.3	43.5	68.6	61.1	65.4
1964	75.3	65.1	37.5	47.6	56.1	52.9	56.8	51.8	46.8	72.5	65.6	70.4
1965	78.2	68.2	38.3	49.2	58.8	55.9	60.0	55.8	49.7	74.8	69.7	71.4
1966	79.3	69.2	42.4	52.1	60.6	60.6	61.8	61.3	52.5	77.8	72.5	72.4
1967	78.1	70.2	48.8	54.4	64.3	63.7	64.1	65.2	56.0	80.6	77.3	75.2
1968	80.8	75.4	54.7	59.2	68.6	68.3	70.2	70.4	61.4	82.5	82.6	81.3
1969	81.4	79.2	62.2	64.0	70.4	74.1	74.9	72.4	66.3	88.1	87.4	83.3
1970	80.0	77.6	69.3	68.7	72.2	77.3	76.7	75.7	71.4	89.7	89.1	83.8
1971	84.7	82.6	72.1	71.8	76.9	80.9	78.0	75.0	74.4	91.8	92.7	85.8
1972	89.7	86.6	78.8	78.2	81.3	83.6	82.3	80.8	79.7	95.6	94.7	89.7
1973	94.4	91.7	86.3	84.3	84.7	87.9	87.0	88.4	86.4	101.0	99.8	97.5
1974	90.2	92.6	85.7	86.7	89.2	88.5	88.6	91.3	90.5	103.5	102.7	95.9
1975	91.3	88.4	84.7	85.3	95.0	89.1	89.2	86.6	86.7	102.2	102.2	93.5
1976	96.6	94.5	94.0	95.7	99.0	95.3	98.0	98.4	96.3	102.6	102.4	98.4
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	101.7	101.3	108.7	105.9	100.3	103.7	101.7	106.3	105.5	99.2	100.1	101.0
1979	101.1	101.5	116.7	111.8	105.1	108.6	106.0	115.4	109.9	103.8	106.2	101.6
1980	99.9	97.3	124.7	117.1	111.6	109.5	105.4	121.2	111.8	103.4	106.7	97.8
1981	102.1	100.8	128.5	122.5	112.1	111.5	106.3	124.4	115.5	103.9	106.6	101.3
1982	102.7	95.2	136.0	132.6	114.1	114.2	107.7	127.2	119.0	105.0	110.6	108.2
1983	111.2	103.4	144.2	141.6	121.4	116.5	113.7	133.9	126.7	112.6	119.3	117.6
1984	118.9	113.3	156.5	147.2	120.3	118.8	117.9	147.3	135.8	120.7	125.7	125.0
1985	124.4	116.7	164.4	151.6	117.0	122.9	120.5	153.9	137.1	123.6	129.6	129.3
1986	129.0	116.5	165.8	156.2	115.6	125.3	119.4	159.3	136.0	122.6	128.4	133.5
1987	134.0	120.0	179.7	162.6	114.0	127.5	120.3	166.3	135.7	126.7	133.4	143.0
1988	138.6	125.6	195.2		114.3	134.8	125.5	176.0	141.9		137.6	151.0

NOTE: THE DATA RELATE TO ALL EMPLOYED PERSONS (WAGE AND SALARY EARNERS, THE SELF-EMPLOYED, AND UNPAID FAMILY WORKERS) IN THE UNITED STATES AND CANADA, AND ALL EMPLOYEES (WAGE AND SALARY EARNERS) IN THE OTHER COUNTRIES.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

OUTPUT IN MANUFACTURING, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN	UNITED KINGDOM
1950	40.0	27.2	3.9		32.3	20.9	17.3	14.5	23.7	37.1	35.4	52.3
1955	50.8	35.3	8.8		35.5	26.5	33.1	22.5	32.5	45.4	40.9	61.5
1960	52.5	41.3	19.2	41.9	49.2	36.5	50.0	33.0	44.8	54.8	52.6	71.2
1961	52.6	42.9	23.0	43.8	51.9	39.2	53.1	36.5	46.4	57.1	56.2	71.3
1962	57.1	47.9	25.0	47.2	56.3	42.1	55.7	40.3	48.7	57.6	60.5	71.5
1963	61.6	51.0	27.9	49.4	57.1	45.3	56.8	43.0	50.7	61.0	63.5	73.9
1964	66.0	56.1	32.4	53.9	63.8	49.5	61.8	43.5	55.5	65.4	69.1	80.8
1965	71.7	61.8	33.6	55.7	68.0	51.9	66.7	45.8	59.4	68.8	73.9	83.0
1966	77.2	65.8	38.1	58.9	69.4	56.7	68.0	50.0	62.6	72.9	76.1	84.5
1967	77.0	67.2	45.7	59.6	70.1	59.5	66.6	54.9	65.1	75.3	78.5	85.0
1968	80.9	71.7	52.8	63.8	75.5	62.8	73.6	60.1	71.3	77.1	82.5	91.0
1969	83.2	76.7	61.4	71.3	79.6	70.3	82.3	63.9	78.1	82.7	89.0	94.5
1970	78.6	73.5	69.9	78.6	82.0	75.5	86.6	69.0	84.4	86.5	92.5	94.9
1971	79.9	78.1	73.8	82.1	83.7	80.3	87.5	70.1	86.5	89.6	93.1	93.8
1972	87.0	84.5	80.9	88.3	90.8	84.0	90.4	74.2	89.6	93.9	93.7	95.8
1973	96.3	93.5	91.9	96.4	95.9	90.5	96.1	83.5	95.8	99.2	100.3	104.7
1974	91.7	96.3	91.7	100.2	97.4	92.2	95.4	89.4	100.0	104.2	105.7	103.4
1975	84.9	89.9	86.2	92.7	95.0	90.3	91.0	84.1	92.7	101.9	106.1	96.3
1976	93.1	96.5	94.8	99.7	99.6	95.6	98.0	96.5	99.0	102.1	106.1	98.1
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.0	104.6	106.7	101.4	99.7	102.3	101.8	104.9	102.8	97.7	97.3	100.6
1979	108.1	108.5	113.9	104.2	105.4	105.3	106.6	115.7	106.1	100.5	103.6	100.5
1980	103.2	103.6	124.1	106.8	110.1	104.6	106.6	121.9	106.6	99.5	104.0	91.8
1981	104.8	107.4	129.8	105.6	106.6	102.9	104.9	119.9	106.7	98.6	100.6	86.3
1982	98.4	93.6	137.3	110.1	108.3	104.0	102.4	118.7	105.0	96.8	100.1	86.4
1983	104.7	99.6	148.2	114.7	115.6	103.8	103.6	119.7	107.0	97.2	105.2	88.8
1984	117.5	112.5	165.4	118.0	121.0	102.6	106.4	125.3	113.3	102.7	111.5	92.5
1985	122.0	118.8	177.0	119.6	124.9	103.0	110.0	129.0	116.7	106.5	115.3	94.8
1986	124.7	121.9	177.8	121.4	125.9	102.8	110.8	131.9	118.1	106.9	114.7	95.6
1987	130.1	128.5	190.8	123.3	121.1	101.8	111.6	137.3	118.7	108.3	119.2	101.0
1988	138.1	136.0	212.3		118.4	105.7	116.3	145.3	123.8		124.0	108.2

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

TOTAL HOURS IN MANUFACTURING, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN	UNITED KINGDOM
1950	78.2	78.1	41.5		115.1	90.5	89.6	68.4	116.4	95.3	117.1	114.7
1955	86.6	82.4	55.3		116.2	92.0	119.1	75.7	127.3	105.1	123.7	124.9
1960	84.4	81.4	82.7	127.1	132.4	97.6	123.8	88.9	138.4	101.1	124.4	127.3
1961	82.3	80.3	87.6	131.0	132.1	99.2	125.8	90.7	136.0	101.9	126.8	127.3
1962	85.6	83.7	91.1	134.3	136.4	100.3	123.5	90.7	138.5	102.8	127.1	124.9
1963	86.5	86.1	94.1	135.4	133.9	103.0	121.0	94.0	139.4	105.7	126.0	122.8
1964	88.4	90.4	96.4	138.9	138.3	104.7	121.5	94.3	140.3	107.1	126.7	125.6
1965	93.6	95.0	96.1	136.4	140.5	102.8	123.6	89.0	141.1	107.4	126.4	125.3
1966	99.7	98.9	98.9	135.2	136.5	104.1	120.7	89.5	139.9	110.1	124.9	123.5
1967	99.5	99.2	103.4	129.3	128.7	102.8	110.8	93.7	135.8	108.8	119.0	118.8
1968	101.4	98.6	106.0	127.3	126.9	98.1	113.4	94.9	133.0	105.9	114.7	118.5
1969	103.0	100.2	106.8	130.2	128.6	104.0	119.1	97.5	133.0	104.0	115.0	120.1
1970	97.3	97.2	107.9	130.2	125.1	105.7	121.7	98.9	131.2	106.4	114.6	118.1
1971	93.7	96.5	107.6	128.3	119.6	106.6	118.2	98.7	127.6	106.5	110.7	111.5
1972	97.7	99.5	107.4	123.8	120.0	107.0	114.6	96.1	121.6	105.9	106.0	107.8
1973	103.1	103.6	110.7	122.3	115.2	107.9	114.4	100.1	117.6	105.1	105.7	109.8
1974	101.2	105.0	106.1	120.4	113.2	107.8	109.3	100.2	113.5	106.5	107.0	106.6
1975	91.4	101.5	98.2	107.1	100.4	101.8	101.0	97.6	107.6	104.3	105.9	101.5
1976	95.9	101.8	100.6	104.6	101.4	101.3	101.6	98.6	103.3	101.7	104.3	99.0
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	104.4	103.4	98.8	95.5	98.3	97.8	98.7	98.5	96.6	96.5	94.6	99.1
1979	106.5	106.3	99.3	93.0	99.0	95.9	98.5	99.3	94.4	93.6	93.4	98.0
1980	101.7	105.5	101.2	89.6	98.0	94.6	98.1	99.8	93.6	92.6	92.3	90.1
1981	101.1	104.3	102.0	82.8	93.4	90.3	94.6	95.6	91.2	91.3	88.9	80.6
1982	92.9	95.2	101.7	81.4	94.5	85.2	91.0	92.4	88.0	88.6	85.9	76.2
1983	93.5	94.5	104.2	77.5	96.2	83.0	86.9	88.5	83.6	82.9	83.9	72.2
1984	99.5	98.3	108.5	76.1	101.2	80.4	86.1	84.2	81.4	82.8	85.1	71.2
1985	98.7	101.2	109.8	75.4	103.8	77.6	85.7	82.3	80.5	84.0	84.7	70.7
1986	97.7	103.6	108.6	73.8	108.4	76.1	86.4	83.3	81.5	84.9	84.3	69.0
1987	98.6	106.6	108.1	72.3	103.3	74.4	85.9	84.6	81.3	81.9	84.0	68.5
1988	101.4	109.4	111.7		101.0	73.4	85.5	87.0	80.8		85.5	69.8

NOTE: THE DATA RELATE TO ALL EMPLOYED PERSONS (WAGE AND SALARY EARNERS, THE SELF-EMPLOYED, AND UNPAID FAMILY WORKERS) IN THE UNITED STATES AND CANADA, AND ALL EMPLOYEES (WAGE AND SALARY EARNERS) IN THE OTHER COUNTRIES.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

EMPLOYMENT IN MANUFACTURING, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN	UNITED KINGDOM
1950	77.9	72.3	38.3		85.6	80.7	68.1	60.8	93.6	75.7	88.3	102.1
1955	86.0	79.1	48.8		88.0	82.5	90.5	65.7	102.1	83.3	93.9	109.8
1960	85.5	78.7	70.0	103.2	105.6	87.1	104.4	76.3	109.9	83.3	99.7	114.4
1961	83.2	78.0	75.5	106.6	108.6	88.0	108.1	78.7	112.7	85.4	102.6	115.9
1962	85.7	80.4	80.4	109.0	111.3	89.2	109.0	81.2	115.6	86.4	103.5	114.9
1963	86.4	82.4	83.7	110.1	110.9	91.6	108.4	83.8	116.7	89.0	103.8	113.1
1964	87.6	86.2	86.4	113.2	113.6	93.6	108.8	84.0	118.6	90.2	105.4	114.8
1965	91.7	90.6	87.8	113.1	115.6	92.9	111.1	82.0	119.6	91.9	106.1	116.3
1966	97.4	95.0	89.8	113.0	114.5	93.6	110.0	81.6	119.2	93.7	104.9	116.6
1967	98.6	95.7	93.7	109.5	109.1	93.4	103.9	84.2	116.3	93.4	101.5	113.0
1968	100.2	95.0	96.4	107.7	110.1	91.9	104.9	85.3	116.0	93.4	99.9	111.9
1969	102.2	96.9	98.7	111.3	113.1	94.9	109.9	88.3	117.9	93.9	101.9	113.5
1970	98.2	94.7	101.0	114.3	113.5	97.7	112.9	91.1	118.2	96.5	103.8	113.3
1971	94.4	94.6	102.3	114.4	108.9	99.2	112.2	93.6	116.3	97.6	100.5	109.4
1972	97.0	97.5	102.7	112.9	111.7	100.6	109.9	91.8	112.4	98.2	98.9	106.8
1973	102.1	102.0	106.6	114.4	113.2	102.9	110.5	94.5	110.9	98.2	100.5	107.5
1974	101.7	104.1	107.0	115.6	109.1	104.2	107.7	97.9	110.5	100.6	102.9	107.9
1975	93.0	101.7	101.7	108.6	100.0	101.4	102.0	97.1	106.9	99.7	103.8	102.9
1976	96.4	102.1	100.9	104.2	100.5	100.3	100.0	98.1	102.7	99.5	103.6	99.7
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	104.2	103.2	98.2	95.8	99.5	98.7	100.2	98.7	97.5	98.5	97.2	99.6
1979	106.9	106.9	97.6	93.2	100.3	96.9	100.6	100.3	96.5	96.9	97.5	98.9
1980	103.2	106.5	99.6	91.2	98.7	95.5	101.1	100.6	95.4	96.2	97.4	93.8
1981	102.7	106.5	101.0	86.2	95.2	92.3	98.7	96.3	92.4	94.9	94.4	85.1
1982	95.8	98.3	100.9	83.0	94.9	91.1	95.1	93.4	88.2	92.2	90.5	79.9
1983	94.1	96.3	102.8	81.0	95.3	89.1	91.1	89.4	84.4	86.3	88.2	75.5
1984	98.8	99.2	105.7	80.1	100.6	86.4	90.2	85.1	83.4	85.2	88.7	74.0
1985	98.1	101.8	107.6	78.9	106.7	83.8	91.3	83.8	85.1	86.2	88.9	73.3
1986	96.7	104.7	107.2	77.7	108.9	82.1	92.8	82.8	86.8	87.2	89.3	71.7
1987	97.1	107.1	106.1	75.9	106.3	79.9	92.8	82.6	87.4	85.5	89.3	70.7
1988	99.6	108.3	108.8		103.6	78.4	92.7	82.6	87.2		90.1	71.6

NOTE: THE DATA RELATE TO ALL EMPLOYED PERSONS (WAGE AND SALARY EARNERS, THE SELF-EMPLOYED, AND UNPAID FAMILY WORKERS) IN THE UNITED STATES AND CANADA, AND ALL EMPLOYEES (WAGE AND SALARY EARNERS) IN THE OTHER COUNTRIES.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

AVERAGE WEEKLY HOURS IN MANUFACTURING, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN	UNITED KINGDOM
1950	100.3	108.1	108.3		134.5	112.1	131.5	112.4	124.4	125.8	132.7	112.3
1955	100.7	104.1	113.5		132.1	111.5	131.6	115.3	124.7	126.1	131.8	113.7
1960	98.7	103.4	118.2	123.2	125.3	112.1	118.5	116.5	125.9	121.2	124.7	111.3
1961	98.9	102.9	116.1	122.9	121.7	112.6	116.4	115.3	120.7	119.4	123.6	109.8
1962	99.8	104.1	113.3	123.2	122.6	112.4	113.3	111.7	119.8	119.0	122.7	108.7
1963	100.1	104.5	112.3	123.0	120.7	112.5	111.6	112.2	119.5	118.8	121.4	108.6
1964	100.9	104.9	111.6	122.6	121.7	111.8	111.7	112.2	118.3	118.8	120.2	109.4
1965	102.0	104.9	109.5	120.6	121.5	110.7	111.2	108.5	118.0	116.8	119.2	107.8
1966	102.4	104.2	110.1	119.7	119.3	111.3	109.7	109.7	117.4	117.5	119.1	105.9
1967	101.0	103.6	110.3	118.1	117.9	110.1	106.6	111.2	116.8	116.5	117.2	105.1
1968	101.2	103.8	109.9	118.2	115.3	106.8	108.1	111.2	114.6	113.3	114.8	105.9
1969	100.8	103.4	108.3	117.0	113.8	109.7	108.4	110.5	112.8	110.8	112.8	105.9
1970	99.1	102.6	106.9	113.9	110.2	108.3	107.8	108.5	111.0	110.3	110.4	104.2
1971	99.3	102.1	105.1	112.2	109.8	107.5	105.3	105.5	109.8	109.1	110.2	101.9
1972	100.8	102.1	104.6	109.6	107.4	106.4	104.3	104.7	108.2	107.8	107.2	100.9
1973	101.0	101.6	103.8	107.0	101.7	104.9	103.6	106.0	106.1	107.0	105.2	102.1
1974	99.5	101.0	99.2	104.1	103.7	103.4	101.4	102.3	102.7	105.8	104.0	98.9
1975	98.3	99.9	96.6	98.6	100.4	100.4	99.0	100.5	100.6	104.6	102.0	98.6
1976	99.5	99.7	99.7	100.4	100.9	100.9	101.6	100.5	100.6	102.2	100.7	99.4
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	100.2	100.2	100.6	99.8	98.8	99.2	98.6	99.7	99.1	98.0	97.4	99.5
1979	99.7	99.5	101.7	99.8	98.7	99.0	97.9	99.0	97.9	96.7	95.8	99.1
1980	98.5	99.1	101.6	98.3	99.4	99.1	97.0	99.2	98.2	96.2	94.7	96.0
1981	98.5	97.9	101.0	96.0	98.2	97.8	95.8	99.2	98.8	96.2	94.2	94.6
1982	97.0	96.9	100.8	98.0	99.6	93.6	95.7	99.0	99.7	96.1	94.9	95.4
1983	99.3	98.1	101.4	95.6	101.0	93.1	95.4	99.0	99.1	96.1	95.1	95.6
1984	100.7	99.1	102.6	95.0	100.6	93.1	95.4	99.0	97.6	97.2	96.0	96.3
1985	100.6	99.4	102.0	95.6	97.3	92.7	93.9	98.1	94.5	97.5	95.3	96.4
1986	101.1	98.9	101.3	95.0	99.5	92.7	93.1	100.6	93.9	97.3	94.4	96.3
1987	101.6	99.5	101.8	95.3	97.2	93.2	92.6	102.4	93.0	95.8	94.1	96.9
1988	101.7	101.0	102.7		97.5	93.6	92.3	105.3	92.6		94.9	97.5

NOTE: THE DATA RELATE TO ALL EMPLOYED PERSONS (WAGE AND SALARY EARNERS, THE SELF-EMPLOYED, AND UNPAID FAMILY WORKERS) IN THE UNITED STATES AND CANADA, AND ALL EMPLOYEES (WAGE AND SALARY EARNERS) IN THE OTHER COUNTRIES.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

HOURLY COMPENSATION IN MANUFACTURING, NATIONAL CURRENCY BASIS, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE (1)	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN (1)	UNITED KINGDOM (1)
1950	21.4	15.0	3.7		6.8	5.7	7.8	4.9	6.1	7.4	6.7	8.0
1955	28.7	21.3	6.5		9.3	10.0	11.6	7.0	8.8	11.2	10.6	11.4
1960	36.5	27.5	8.9	13.8	12.6	15.0	18.8	9.2	12.5	15.8	14.7	15.2
1961	37.6	28.2	10.4	14.6	14.1	16.6	21.1	10.2	14.2	17.3	16.1	16.3
1962	39.0	29.1	11.8	15.7	15.5	18.4	23.9	12.0	15.2	19.0	18.0	17.1
1963	40.2	30.2	13.2	17.3	16.8	20.0	25.5	14.2	16.7	19.9	19.9	17.9
1964	41.9	31.5	14.9	19.5	18.2	21.7	27.6	15.1	19.4	21.3	21.7	19.1
1965	42.7	33.3	16.7	21.7	20.2	23.6	30.3	16.2	21.7	23.3	23.9	20.9
1966	44.6	36.0	18.4	23.9	22.9	24.9	32.9	17.2	24.3	25.3	26.2	22.6
1967	46.9	38.2	20.7	26.2	25.7	26.8	34.7	19.0	27.0	28.4	29.1	23.3
1968	50.2	41.1	24.0	28.0	28.3	30.4	37.3	20.3	30.0	31.1	31.5	25.0
1969	53.7	44.4	28.5	30.7	31.9	32.3	40.8	22.3	34.2	34.3	34.3	27.3
1970	57.4	47.9	33.9	34.9	36.3	36.3	48.0	27.1	39.0	37.9	38.5	31.4
1971	60.9	51.6	39.2	40.0	41.8	40.9	53.8	31.3	44.6	43.3	43.3	36.3
1972	64.2	55.4	45.1	46.1	46.3	45.2	59.6	35.1	50.9	48.2	48.4	42.0
1973	68.8	60.0	55.1	53.5	56.1	51.9	67.5	41.2	60.5	54.6	54.2	47.9
1974	76.2	69.1	72.3	65.2	67.9	62.0	76.9	53.9	71.9	63.7	63.8	57.4
1975	85.1	78.9	84.2	79.0	81.0	76.1	84.5	68.0	82.2	77.2	77.3	76.4
1976	92.1	90.3	90.7	89.5	90.4	87.8	91.2	84.5	91.9	88.9	91.5	88.4
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	108.2	107.6	106.6	107.8	110.2	113.0	107.8	115.2	108.4	110.0	111.4	116.7
1979	118.6	118.6	113.4	117.4	123.1	128.4	116.1	139.5	117.0	116.0	120.1	139.0
1980	132.4	131.3	120.7	130.2	135.9	148.5	125.6	163.7	123.6	128.0	133.6	168.6
1981	145.2	151.1	129.8	144.5	149.7	172.0	134.5	197.9	129.1	142.8	148.1	193.4
1982	157.5	167.0	136.6	150.7	162.9	204.0	141.0	233.3	137.5	156.1	158.9	211.7
1983	162.4	177.2	140.7	159.8	174.2	225.2	148.3	273.1	144.5	173.5	173.3	226.6
1984	168.0	185.6	144.9	173.1	184.1	244.9	155.5	313.3	148.6	188.3	189.7	242.3
1985	176.4	194.4	151.4	183.6	196.5	265.4	164.6	352.0	156.9	204.3	212.4	258.8
1986	183.0	203.5	158.9	190.8	203.5	278.7	171.5	367.4	162.2	224.2	228.7	277.8
1987	186.9	214.0	162.5	194.7	225.9	291.4	178.1	391.2	167.0	257.4	244.8	295.7
1988	193.5	227.1	171.3		230.1	301.9	185.5	416.3	172.8		261.1	319.3

(1) COMPENSATION ADJUSTED TO INCLUDE CHANGES IN EMPLOYMENT TAXES THAT ARE NOT COMPENSATION TO EMPLOYEES, BUT ARE LABOR COSTS TO EMPLOYERS.

NOTE: THE DATA RELATE TO ALL EMPLOYED PERSONS (WAGE AND SALARY EARNERS, THE SELF-EMPLOYED, AND UNPAID FAMILY WORKERS) IN THE UNITED STATES AND CANADA, AND ALL EMPLOYEES (WAGE AND SALARY EARNERS) IN THE OTHER COUNTRIES.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

HOURLY COMPENSATION IN MANUFACTURING, U.S. DOLLAR BASIS, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE (1)	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN (1)	UNITED KINGDOM (1)
1950	21.4	14.6	2.7		5.9	8.0	4.3	6.9	3.9	5.5	5.8	12.8
1955	28.7	22.9	4.8		8.1	14.0	6.4	9.8	5.7	8.4	9.2	18.2
1960	36.5	30.1	6.6	9.9	11.0	15.1	10.5	13.0	8.1	11.8	12.7	24.5
1961	37.6	29.6	7.7	10.5	12.3	16.6	12.2	14.4	9.6	12.9	14.0	26.1
1962	39.0	28.9	8.8	11.3	13.5	18.4	13.9	17.0	10.4	14.2	15.6	27.5
1963	40.2	29.8	9.8	12.4	14.6	20.0	14.8	20.1	11.4	14.8	17.1	28.7
1964	41.9	31.0	11.0	14.1	15.8	21.8	16.1	21.4	13.2	15.8	18.8	30.5
1965	42.7	32.8	12.4	15.6	17.5	23.6	17.6	22.9	14.8	17.3	20.7	33.4
1966	44.6	35.5	13.6	17.2	19.9	25.0	19.1	24.4	16.5	18.8	22.7	36.1
1967	46.9	37.6	15.3	18.9	22.1	26.8	20.2	26.9	18.4	21.2	25.1	36.7
1968	50.2	40.5	17.8	20.1	22.7	30.2	21.7	28.7	20.4	23.1	27.3	34.2
1969	53.7	43.8	21.3	21.9	25.4	30.7	24.1	31.4	23.1	25.5	29.7	37.3
1970	57.4	48.8	25.3	25.2	29.1	32.3	30.5	38.2	26.5	28.2	33.2	43.2
1971	60.9	54.3	30.2	29.5	33.9	36.5	35.9	44.7	31.3	32.8	37.9	50.9
1972	64.2	59.4	39.8	37.5	39.9	44.1	43.4	53.0	38.9	38.9	45.4	60.2
1973	68.8	63.7	54.5	49.4	56.0	57.5	59.1	62.6	53.4	50.5	55.6	67.3
1974	76.2	75.0	66.4	60.0	67.0	63.4	69.1	73.2	65.8	61.4	64.3	77.0
1975	85.1	82.5	76.0	77.1	84.8	87.4	79.9	92.1	79.9	78.8	83.3	97.3
1976	92.1	97.3	81.9	83.1	89.8	90.4	84.2	89.8	85.3	86.7	93.8	91.4
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	108.2	100.3	137.0	122.9	120.1	123.4	124.8	119.8	123.1	111.7	110.2	128.3
1979	118.6	107.6	139.2	143.4	140.5	148.3	147.0	148.2	143.1	121.9	125.2	169.0
1980	132.4	119.3	143.2	159.7	145.0	172.9	160.7	169.0	152.7	138.0	141.1	224.7
1981	145.2	133.9	157.6	139.8	125.9	155.4	138.5	153.4	127.3	132.3	130.6	224.4
1982	157.5	143.8	146.9	118.0	117.2	152.4	134.8	152.1	126.3	128.6	113.0	212.0
1983	162.4	152.8	158.6	112.0	114.3	145.2	134.8	158.7	124.2	126.5	100.9	196.9
1984	168.0	152.3	163.5	107.4	106.7	137.8	126.9	157.5	113.7	122.8	102.5	185.6
1985	176.4	151.3	170.1	110.9	111.3	145.3	129.9	162.8	116.0	126.5	110.3	192.4
1986	183.0	155.6	252.7	153.1	150.9	197.8	183.4	217.5	162.5	157.0	143.4	233.7
1987	186.9	171.5	301.0	186.8	198.1	238.3	230.0	266.2	202.3	203.2	172.3	277.9
1988	193.5	196.1	357.9		204.9	249.0	245.0	282.1	214.4		190.1	326.0

(1) COMPENSATION ADJUSTED TO INCLUDE CHANGES IN EMPLOYMENT TAXES THAT ARE NOT COMPENSATION TO EMPLOYEES, BUT ARE LABOR COSTS TO EMPLOYERS.

NOTE: THE DATA RELATE TO ALL EMPLOYED PERSONS (WAGE AND SALARY EARNERS, THE SELF-EMPLOYED, AND UNPAID FAMILY WORKERS) IN THE UNITED STATES AND CANADA, AND ALL EMPLOYEES (WAGE AND SALARY EARNERS) IN THE OTHER COUNTRIES.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

UNIT LABOR COSTS IN MANUFACTURING, NATIONAL CURRENCY BASIS, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN	UNITED KINGDOM
1950	41.8	43.0	38.7		24.2	24.5	40.3	22.9	29.8	18.9	22.1	17.5
1955	48.9	49.7	40.8		30.3	34.6	41.8	23.5	34.7	26.0	32.0	23.1
1960	58.7	54.2	38.4	41.7	33.8	40.2	46.6	24.7	38.5	29.2	34.8	27.2
1961	58.7	52.8	39.4	43.6	35.9	41.9	50.0	25.3	41.7	30.9	36.4	29.1
1962	58.5	50.9	43.2	44.5	37.5	43.7	52.9	26.9	43.2	33.9	37.8	29.8
1963	56.4	51.0	44.6	47.4	39.4	45.4	54.2	31.0	46.0	34.5	39.5	29.7
1964	56.1	50.8	44.3	50.4	39.4	46.0	54.2	32.8	49.0	34.9	39.7	29.6
1965	55.8	51.2	47.8	53.1	41.7	46.6	56.1	31.5	51.6	36.3	40.9	31.5
1966	57.7	54.1	47.8	54.9	45.1	45.8	58.4	30.9	54.4	38.1	43.0	33.0
1967	60.6	56.3	46.7	56.8	47.2	46.4	57.7	32.4	56.3	41.1	44.1	32.5
1968	62.9	56.6	48.3	55.9	47.6	47.6	57.5	32.1	56.1	42.6	43.8	32.5
1969	66.5	58.0	49.5	56.0	51.4	47.8	59.0	34.0	58.1	43.1	44.3	34.6
1970	71.0	63.4	52.3	57.8	55.4	50.8	67.4	38.8	60.7	46.6	47.7	39.1
1971	71.4	63.7	57.1	62.4	59.7	54.3	72.7	44.0	65.8	51.5	51.5	43.1
1972	72.1	65.3	59.9	64.7	61.1	57.6	75.6	45.5	69.1	54.3	54.8	47.2
1973	73.7	66.5	66.4	67.9	67.4	62.0	80.3	49.4	74.3	57.8	57.2	50.2
1974	84.1	75.3	83.6	78.3	79.0	72.5	88.0	60.4	81.6	65.1	64.6	59.2
1975	91.7	89.1	96.0	91.2	85.6	85.8	93.8	79.0	95.4	79.0	77.1	80.5
1976	94.9	95.3	96.2	93.9	92.1	93.0	94.6	86.3	96.0	88.5	90.0	89.2
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.6	106.5	98.7	101.6	108.6	108.0	104.5	108.1	101.8	108.7	108.4	115.0
1979	117.0	116.2	98.8	104.8	115.7	117.0	107.3	119.7	104.1	108.1	108.3	135.6
1980	130.6	133.7	98.4	109.2	121.0	134.3	115.7	134.0	108.5	119.1	118.6	165.5
1981	140.1	146.7	102.0	113.2	131.1	151.0	121.2	157.8	110.4	132.2	130.9	180.6
1982	148.7	170.0	101.2	111.5	142.2	167.2	125.2	181.6	115.2	142.9	136.3	186.5
1983	145.0	168.1	98.9	107.9	144.9	179.9	124.4	201.9	113.0	148.0	138.1	184.1
1984	142.2	162.3	95.0	111.7	153.9	192.0	125.8	210.6	106.8	151.8	144.8	186.5
1985	142.7	165.7	94.0	115.8	163.3	200.0	128.3	224.5	108.1	161.1	156.1	193.0
1986	143.3	172.8	97.1	116.0	175.1	206.2	133.7	232.0	112.0	178.1	168.2	200.4
1987	141.7	177.5	92.1	114.2	192.8	213.0	137.1	241.0	114.4	194.7	172.6	200.4
1988	142.1	182.7	90.2		196.3	209.6	136.4	249.1	112.8		180.0	206.2

NOTE: THE DATA RELATE TO ALL EMPLOYED PERSONS (WAGE AND SALARY EARNERS, THE SELF-EMPLOYED, AND UNPAID FAMILY WORKERS) IN THE UNITED STATES AND CANADA, AND ALL EMPLOYEES (WAGE AND SALARY EARNERS) IN THE OTHER COUNTRIES.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

UNIT LABOR COSTS IN MANUFACTURING, U.S. DOLLAR BASIS, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN	UNITED KINGDOM
1950	41.8	41.8	28.8		21.1	34.5	22.3	32.4	19.2	14.1	19.1	28.0
1955	48.9	53.6	30.4		26.4	48.6	23.0	33.1	22.3	19.4	27.6	36.9
1960	58.7	59.4	28.5	30.0	29.5	40.3	25.9	35.1	25.1	21.8	30.1	43.7
1961	58.7	55.4	29.2	31.3	31.2	42.0	28.9	35.9	28.2	23.0	31.5	46.7
1962	58.5	50.6	32.0	32.1	32.6	43.9	30.7	38.2	29.4	25.3	32.8	48.0
1963	56.4	50.3	33.0	34.1	34.3	45.6	31.6	44.1	31.3	25.7	34.0	47.6
1964	56.1	50.0	32.7	36.3	34.2	46.1	31.6	46.3	33.3	25.9	34.5	47.4
1965	55.8	50.4	35.4	38.3	36.2	46.8	32.6	44.5	35.2	27.1	35.4	50.5
1966	57.7	53.3	35.4	39.5	39.2	45.8	33.9	43.6	36.9	28.4	37.2	52.8
1967	60.6	55.5	34.5	40.9	40.6	46.4	33.6	45.9	38.3	30.6	38.1	51.2
1968	62.9	55.8	35.9	40.1	38.2	47.2	33.4	45.4	38.0	31.8	37.9	44.6
1969	66.5	57.2	37.0	40.0	41.1	45.4	34.9	47.8	39.4	32.1	38.3	47.5
1970	71.0	64.5	39.1	41.7	44.4	45.2	42.9	54.7	41.2	34.7	41.1	53.7
1971	71.4	67.1	44.0	46.1	48.4	48.5	48.5	62.9	46.3	39.0	45.1	60.4
1972	72.1	70.0	52.9	52.7	52.8	56.1	55.1	68.8	52.8	43.9	51.4	67.7
1973	73.7	70.6	65.6	62.7	67.2	68.6	70.4	75.0	65.6	53.5	58.7	70.5
1974	84.1	81.8	76.8	72.1	77.9	74.1	79.1	82.0	74.6	62.8	65.1	79.4
1975	91.7	93.1	86.7	89.1	89.6	98.5	88.7	106.8	92.8	80.6	83.2	102.5
1976	94.9	102.7	86.9	87.2	91.5	95.8	87.3	91.8	89.1	86.4	92.3	92.3
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.6	99.3	126.8	115.8	118.4	117.9	121.0	112.4	115.7	110.4	107.2	126.5
1979	117.0	105.4	121.3	128.1	132.0	135.2	135.9	127.2	127.4	113.6	112.9	164.9
1980	130.6	121.5	116.8	134.0	129.0	156.4	147.9	138.4	134.1	128.4	125.3	220.6
1981	140.1	130.0	123.8	109.6	110.3	136.4	124.9	122.4	108.9	122.5	115.4	209.6
1982	148.7	146.3	108.8	87.2	102.3	124.9	119.7	118.4	105.8	117.8	96.9	186.8
1983	145.0	144.9	111.5	75.6	95.1	116.1	113.1	117.3	97.1	107.9	80.4	160.0
1984	142.2	133.2	107.2	69.3	89.3	108.1	102.6	105.9	81.6	99.0	78.2	142.9
1985	142.7	128.9	105.6	69.9	92.5	109.5	101.2	103.8	80.0	99.8	81.1	143.5
1986	143.3	132.1	154.4	93.1	129.9	146.3	143.0	137.4	112.2	124.7	105.4	168.6
1987	141.7	142.3	170.5	109.5	169.0	174.2	177.0	164.0	138.6	153.7	121.5	188.3
1988	142.1	157.8	188.4		174.8	172.9	180.3	168.8	139.9		131.1	210.5

NOTE: THE DATA RELATE TO ALL EMPLOYED PERSONS (WAGE AND SALARY EARNERS, THE SELF-EMPLOYED, AND UNPAID FAMILY WORKERS) IN THE UNITED STATES AND CANADA, AND ALL EMPLOYEES (WAGE AND SALARY EARNERS) IN THE OTHER COUNTRIES.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

EXCHANGE RATES IN TWELVE COUNTRIES, 1950-1988
(VALUE OF FOREIGN CURRENCY RELATIVE TO THE U.S. DOLLAR)

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN	UNITED KINGDOM
1950	100.0	97.2	74.4		87.0	140.5	55.3	141.3	64.4	74.6	86.4	160.5
1955	100.0	107.7	74.4		86.9	140.4	55.2	141.2	64.4	74.6	86.4	160.0
1960	100.0	109.6	74.4	71.8	87.1	100.2	55.7	142.2	65.1	74.6	86.4	160.9
1961	100.0	104.9	74.2	71.8	86.9	100.2	57.8	142.1	67.6	74.5	86.5	160.6
1962	100.0	99.4	74.2	72.0	87.0	100.3	58.1	142.2	68.1	74.6	86.7	160.9
1963	100.0	98.5	74.1	71.8	86.9	100.3	58.2	142.0	68.1	74.4	86.1	160.5
1964	100.0	98.5	74.0	72.0	86.8	100.3	58.4	141.4	68.0	74.4	86.7	160.0
1965	100.0	98.5	74.1	72.2	86.8	100.3	58.1	141.3	68.2	74.4	86.6	160.2
1966	100.0	98.6	73.9	71.9	86.9	100.0	58.0	141.4	67.8	74.4	86.5	160.1
1967	100.0	98.5	73.9	72.1	86.0	99.9	58.2	141.4	68.1	74.4	86.6	157.6
1968	100.0	98.6	74.3	71.7	80.2	99.2	58.1	141.6	67.8	74.5	86.4	137.2
1969	100.0	98.7	74.7	71.4	79.8	94.9	59.2	140.7	67.7	74.5	86.4	137.0
1970	100.0	101.8	74.8	72.2	80.0	88.9	63.7	140.8	67.9	74.5	86.1	137.3
1971	100.0	105.2	77.1	73.8	81.1	89.2	66.8	142.8	70.3	75.6	87.5	140.1
1972	100.0	107.3	88.4	81.4	86.3	97.4	72.8	151.2	76.4	80.8	93.9	143.3
1973	100.0	106.2	98.9	92.3	99.7	110.8	87.6	151.8	88.3	92.6	102.6	140.5
1974	100.0	108.7	91.9	92.1	98.7	102.3	89.9	135.7	91.4	96.4	100.8	134.1
1975	100.0	104.4	90.3	97.6	104.7	114.8	94.5	135.3	97.3	102.1	107.9	127.3
1976	100.0	107.8	90.4	92.9	99.3	102.9	92.2	106.3	92.9	97.5	102.6	103.4
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	100.0	93.2	128.5	114.0	109.0	109.2	115.8	104.0	113.6	101.5	98.9	109.9
1979	100.0	90.7	122.7	122.2	114.1	115.5	126.7	106.2	122.3	105.1	104.2	121.6
1980	100.0	90.9	118.7	122.7	106.7	116.5	127.9	103.2	123.6	107.8	105.6	133.3
1981	100.0	88.6	121.4	96.8	84.1	90.4	103.0	77.5	98.6	92.7	88.2	116.0
1982	100.0	86.1	107.5	78.3	71.9	74.7	95.6	65.2	91.8	82.4	71.1	100.2
1983	100.0	86.2	112.7	70.1	65.6	64.5	90.9	58.1	86.0	72.9	58.2	86.9
1984	100.0	82.0	112.8	62.0	58.0	56.3	81.6	50.3	76.5	65.2	54.0	76.6
1985	100.0	77.8	112.3	60.4	56.6	54.7	78.9	46.2	73.9	61.9	51.9	74.4
1986	100.0	76.5	159.1	80.2	74.2	71.0	107.0	59.2	100.2	70.0	62.7	84.1
1987	100.0	80.1	185.2	95.9	87.7	81.8	129.1	68.1	121.1	79.0	70.4	94.0
1988	100.0	86.3	208.9	97.4	89.1	82.5	132.1	67.8	124.1	81.6	72.8	102.1

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

AVERAGE WEEKLY COMPENSATION IN MANUFACTURING, NATIONAL CURRENCY BASIS, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE (1)	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN (1)	UNITED KINGDOM (1)
1950	21.4	16.2	4.0		9.1	6.4	10.2	5.5	7.5	9.3	8.9	8.9
1955	28.9	22.2	7.4		12.3	11.1	15.3	8.0	11.0	14.1	14.0	12.9
1960	36.1	28.4	10.5	17.0	15.8	16.8	22.3	10.7	15.7	19.2	18.4	16.9
1961	37.2	29.0	12.0	17.9	17.2	18.7	24.5	11.7	17.2	20.7	19.9	17.9
1962	39.0	30.3	13.4	19.3	19.0	20.6	27.1	13.4	18.2	22.6	22.1	18.6
1963	40.3	31.6	14.8	21.3	20.3	22.5	28.4	15.9	20.0	23.6	24.1	19.4
1964	42.2	33.0	16.6	24.0	22.1	24.3	30.8	17.0	22.9	25.3	26.1	20.9
1965	43.6	34.9	18.3	26.1	24.5	26.1	33.7	17.6	25.6	27.2	28.5	22.5
1966	45.7	37.4	20.3	28.7	27.3	27.8	36.1	18.9	28.6	29.7	31.2	23.9
1967	47.3	39.5	22.8	30.9	30.3	29.6	37.0	21.2	31.5	33.1	34.1	24.5
1968	50.8	42.7	26.4	33.1	32.6	32.5	40.3	22.6	34.4	35.2	36.2	26.4
1969	54.2	45.9	30.8	35.9	36.2	35.4	44.2	24.6	38.5	37.9	38.7	28.9
1970	56.9	49.2	36.2	39.8	40.0	39.3	51.7	29.4	43.3	41.8	42.6	32.8
1971	60.4	52.7	41.2	44.8	45.9	44.0	56.7	33.0	48.9	47.3	47.7	37.0
1972	64.7	56.6	47.2	50.6	49.7	48.1	62.2	36.7	55.1	51.9	51.9	42.4
1973	69.5	61.0	57.3	57.2	57.1	54.5	69.9	43.7	64.2	58.4	57.0	48.9
1974	75.8	69.7	71.7	67.9	70.4	64.2	77.9	55.2	73.9	67.4	66.3	56.7
1975	83.7	78.8	81.3	77.9	81.3	76.4	83.7	68.4	82.7	80.8	78.8	75.3
1976	91.6	90.1	90.4	89.9	91.2	88.6	92.7	84.9	92.5	90.8	92.1	87.8
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	108.4	107.9	107.3	107.6	108.9	112.0	106.3	114.9	107.4	107.8	108.5	116.1
1979	118.2	117.9	115.4	117.2	121.6	127.1	113.7	138.1	114.5	112.1	115.1	137.7
1980	130.5	130.1	122.7	127.9	135.1	147.1	121.9	162.5	121.3	123.2	126.6	161.8
1981	143.0	147.9	131.1	138.7	146.9	168.2	128.9	196.4	127.5	137.3	139.4	183.0
1982	152.8	161.8	137.7	147.8	162.3	190.9	134.9	231.0	137.1	150.0	150.7	201.9
1983	161.3	173.8	142.6	152.8	175.8	209.5	141.4	270.3	143.2	166.7	164.8	216.6
1984	169.2	184.0	148.7	164.5	185.2	228.1	148.3	310.1	145.0	183.1	182.1	233.2
1985	177.5	193.3	154.5	175.5	191.1	245.9	154.6	345.5	148.3	199.1	202.3	249.6
1986	184.9	201.3	160.9	181.2	202.5	258.3	159.7	369.6	152.3	218.2	215.9	267.5
1987	189.8	213.0	165.5	185.6	219.7	271.5	164.9	400.8	155.3	246.6	230.3	286.5
1988	196.9	229.4	176.0		224.4	282.5	171.2	438.3	160.0		247.8	311.4

(1) COMPENSATION ADJUSTED TO INCLUDE CHANGES IN EMPLOYMENT TAXES THAT ARE NOT COMPENSATION TO EMPLOYEES, BUT ARE LABOR COSTS TO EMPLOYERS.

NOTE: THE DATA RÉLATE TO ALL EMPLOYED PERSONS (WAGE AND SALARY EARNERS, THE SELF-EMPLOYED, AND UNPAID FAMILY WORKERS) IN THE UNITED STATES AND CANADA, AND ALL EMPLOYEES (WAGE AND SALARY EARNERS) IN THE OTHER COUNTRIES.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

REAL HOURLY COMPENSATION IN MANUFACTURING, CPI BASIS, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN	UNITED KINGDOM
1950	53.7	40.3	19.3		31.1	26.0	17.5	24.0	21.3	31.7	29.3	43.5
1955	64.9	50.6	25.0		34.7	35.1	23.7	27.9	26.4	35.5	35.4	47.6
1960	74.8	59.4	31.8	32.4	42.1	39.6	35.0	32.0	32.8	43.8	41.0	55.8
1961	76.2	60.4	35.2	34.0	45.4	42.3	38.3	34.5	37.1	46.6	44.0	57.8
1962	78.3	61.6	37.6	36.0	46.3	44.7	42.2	38.7	38.7	48.6	46.9	58.2
1963	79.6	63.0	39.0	38.9	47.8	46.5	43.7	42.6	41.2	49.7	50.4	59.6
1964	81.8	64.4	42.3	42.2	49.8	48.9	46.2	42.9	45.1	50.3	53.1	61.7
1965	82.2	66.4	44.2	45.0	52.0	51.7	49.1	44.1	48.6	52.7	55.8	64.4
1966	83.5	69.2	46.4	47.7	55.4	53.3	51.5	45.9	51.5	55.4	57.4	67.0
1967	85.1	70.9	50.0	50.7	57.8	55.9	53.6	49.6	55.1	59.7	61.1	68.7
1968	87.5	73.4	55.2	52.8	58.9	60.9	56.8	52.3	59.2	63.0	65.0	70.6
1969	88.7	75.8	62.2	55.7	64.0	62.5	60.9	55.8	62.7	67.4	68.3	72.7
1970	89.6	79.2	68.7	61.0	68.5	67.1	69.4	64.6	68.6	67.4	71.7	78.6
1971	91.1	82.9	74.8	66.9	74.4	71.4	74.1	71.0	72.8	72.7	74.4	82.8
1972	93.0	85.0	82.0	73.3	77.4	74.3	78.0	75.3	77.1	102.9	78.3	89.2
1973	93.9	85.6	89.8	79.5	85.9	79.4	82.6	80.2	84.9	79.4	81.0	93.1
1974	93.7	88.8	95.5	85.9	90.2	83.4	88.1	87.8	92.0	84.7	86.8	96.2
1975	95.9	91.6	99.6	92.3	98.1	91.4	91.3	94.6	95.4	91.9	95.9	103.4
1976	93.7	97.5	98.1	95.9	100.5	96.2	94.4	100.8	98.0	97.0	102.6	102.7
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	100.6	98.8	102.3	103.2	100.1	103.4	105.2	102.4	104.2	101.8	103.2	107.3
1979	98.6	99.7	104.9	107.6	102.1	106.2	109.0	107.2	107.8	102.4	104.3	112.4
1980	97.4	100.2	103.6	111.8	100.3	108.2	112.2	103.8	106.9	101.8	101.8	115.8
1981	96.8	102.5	106.2	115.4	98.9	110.5	113.0	105.7	104.7	100.0	100.4	119.3
1982	98.9	102.3	108.8	110.7	97.7	117.2	112.4	107.2	105.3	98.2	99.2	119.4
1983	98.8	102.6	110.0	109.0	97.7	118.0	114.5	109.1	108.3	100.7	97.5	122.3
1984	98.0	103.0	110.8	111.0	97.2	119.5	117.3	113.2	107.2	102.9	99.1	124.3
1985	99.3	103.8	113.4	112.3	99.1	122.4	121.6	117.1	110.6	105.6	103.3	125.1
1986	101.2	104.3	118.3	115.2	99.0	125.2	126.9	115.1	114.2	108.1	106.5	129.9
1987	99.7	105.1	120.9	115.7	105.7	126.9	131.7	117.2	118.2	113.8	109.3	132.7
1988	99.1	107.2	126.6		102.9	128.0	135.7	118.8	121.4		111.5	136.6

NOTE: THE DATA RELATE TO ALL EMPLOYED PERSONS (WAGE AND SALARY EARNERS, THE SELF-EMPLOYED, AND UNPAID FAMILY WORKERS) IN THE UNITED STATES AND CANADA, AND ALL EMPLOYEES (WAGE AND SALARY EARNERS) IN THE OTHER COUNTRIES.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

REAL AVERAGE WEEKLY COMPENSATION IN MANUFACTURING, CPI BASIS, TWELVE COUNTRIES, 1950-1988

(INDEXES: 1977=100)

YEAR	UNITED STATES	CANADA	JAPAN	BEL-GIUM	DEN-MARK	FRANCE	GERMANY	ITALY	NETHER-LANDS	NORWAY	SWEDEN	UNITED KINGDOM
1950	53.9	43.6	20.9		41.9	29.2	22.9	27.0	26.5	39.9	38.9	48.9
1955	65.3	52.7	28.4		45.9	39.1	31.1	32.2	32.9	44.7	46.7	54.1
1960	73.8	61.5	37.6	39.9	52.8	44.3	41.5	37.3	41.4	53.1	51.2	62.2
1961	75.3	62.2	40.8	41.7	55.3	47.7	44.6	39.8	44.7	55.7	54.4	63.4
1962	78.2	64.1	42.6	44.3	56.8	50.3	47.8	43.2	46.3	57.8	57.5	63.2
1963	79.7	65.8	43.9	47.9	57.7	52.3	48.7	47.8	49.2	59.0	61.1	64.8
1964	82.5	67.6	47.2	51.8	60.7	54.6	51.6	48.1	53.3	59.7	63.8	67.5
1965	83.9	69.6	48.4	54.3	63.1	57.3	54.6	47.8	57.3	61.6	66.5	69.4
1966	85.5	72.1	51.1	57.1	66.0	59.4	56.5	50.4	60.4	65.1	68.4	71.0
1967	85.9	73.5	55.1	59.8	68.1	61.5	57.1	55.2	64.4	69.6	71.6	72.2
1968	88.5	76.2	60.7	62.4	67.8	65.1	61.4	58.1	67.9	71.4	74.7	74.7
1969	89.4	78.4	67.3	65.1	72.8	68.5	66.1	61.7	70.7	74.7	77.1	77.0
1970	88.8	81.3	73.4	69.5	75.5	72.7	74.8	70.1	76.1	74.4	79.2	81.9
1971	90.4	84.7	78.6	75.1	81.7	76.8	78.0	74.9	79.9	79.3	81.9	84.4
1972	93.8	86.8	85.8	80.4	83.1	79.1	81.3	78.9	83.4	111.0	84.0	90.0
1973	94.9	87.0	93.3	85.0	87.4	83.2	85.6	85.0	90.0	84.9	85.2	95.1
1974	93.2	89.7	94.7	89.5	93.5	86.3	89.3	89.8	94.5	89.6	90.3	95.1
1975	94.3	91.5	96.2	91.0	98.5	91.8	90.4	95.1	96.0	96.2	97.8	101.9
1976	93.2	97.3	97.7	96.3	101.4	97.1	96.0	101.3	98.6	99.1	103.4	102.0
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	100.8	99.0	102.9	103.0	98.9	102.5	103.7	102.2	103.2	99.7	100.5	106.8
1979	98.3	99.2	106.7	107.4	100.8	105.2	106.8	106.1	105.5	99.0	99.9	111.4
1980	96.0	99.3	105.3	109.9	99.7	107.1	108.8	103.0	105.0	98.0	96.4	111.2
1981	95.3	100.4	107.3	110.7	97.1	108.1	108.2	104.9	103.4	96.2	94.6	112.9
1982	95.9	99.1	109.6	108.5	97.3	109.6	107.6	106.1	104.9	94.4	94.1	113.9
1983	98.2	100.7	111.5	104.2	98.7	109.8	109.2	108.0	107.3	96.7	92.7	116.9
1984	98.7	102.1	113.7	105.5	97.8	111.3	111.8	112.0	104.6	100.0	95.1	119.7
1985	100.0	103.2	115.8	107.3	96.3	113.4	114.1	114.9	104.6	102.9	98.4	120.7
1986	102.3	103.2	119.8	109.4	98.5	116.0	118.1	115.8	107.2	105.2	100.5	125.1
1987	101.3	104.6	123.1	110.4	102.7	118.2	121.9	120.1	109.9	109.0	102.8	128.6
1988	100.9	108.3	130.0		100.3	119.8	125.3	125.1	112.4		105.8	133.2

NOTE: THE DATA RELATE TO ALL EMPLOYED PERSONS (WAGE AND SALARY EARNERS, THE SELF-EMPLOYED, AND UNPAID FAMILY WORKERS) IN THE UNITED STATES AND CANADA, AND ALL EMPLOYEES (WAGE AND SALARY EARNERS) IN THE OTHER COUNTRIES.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

KOREA

OUTPUT AND UNIT LABOR COSTS, ALL EMPLOYEES IN MANUFACTURING, 1970-1988

(INDEXES: 1977=100)

YEAR	OUTPUT	COMPENSATION (1)	UNIT LABOR COST		EXCHANGE RATE (2)
			NATIONAL CURRENCY BASIS	U.S. DOLLAR BASIS	
1970	30.9	10.5	34.1	53.2	155.8
1971	36.6	13.3	36.2	50.5	139.4
1972	41.6	16.7	40.2	49.5	123.2
1973	53.6	25.7	47.9	58.2	121.5
1974	62.3	36.9	59.2	70.8	119.7
1975	69.7	47.4	68.0	68.0	100.0
1976	86.7	74.4	85.7	85.7	100.0
1977	100.0	100.0	100.0	100.0	100.0
1978	121.3	144.8	119.4	119.4	100.0
1979	134.1	194.1	144.7	144.7	100.0
1980	132.6	242.9	183.2	145.9	79.7
1981	145.7	306.4	210.3	149.4	71.1
1982	155.5	343.9	221.2	146.4	66.2
1983	179.4	419.2	233.6	145.8	62.4
1984	210.5	495.1	235.2	141.2	60.1
1985	225.5	525.8	233.1	129.7	55.6
1986	266.9	613.6	229.9	126.2	54.9
1987	315.8	761.6	241.2	141.9	58.8
1988	357.0	851.6	238.6	157.8	66.2

(1) COMPENSATION OF EMPLOYEES.
(2) VALUE OF FOREIGN CURRENCY RELATIVE TO THE U.S. DOLLAR.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

TAIWAN

OUTPUT AND UNIT LABOR COSTS, ALL EMPLOYEES IN MANUFACTURING, 1970-1988

(INDEXES: 1977=100)

YEAR	OUTPUT	COMPENSATION (1)	UNIT LABOR COST		EXCHANGE RATE (2)
			NATIONAL CURRENCY BASIS	U.S. DOLLAR BASIS	
1970	42.9	20.8	48.5	46.1	95.0
1971	52.2	26.7	51.1	48.5	95.0
1972	62.8	32.5	51.8	49.2	95.0
1973	73.5	44.3	60.3	59.9	99.3
1974	69.1	63.2	91.5	91.5	100.0
1975	72.5	67.1	92.5	92.5	100.0
1976	88.7	85.0	95.8	95.8	100.0
1977	100.0	100.0	100.0	100.0	100.0
1978	120.0	121.5	101.3	103.9	102.5
1979	129.4	149.0	115.1	121.3	105.4
1980	143.5	189.2	131.8	139.0	105.5
1981	155.6	236.3	151.8	156.6	103.1
1982	158.5	253.5	160.0	155.3	97.1
1983	173.2	272.3	157.2	149.1	94.8
1984	196.7	320.2	162.8	156.2	95.9
1985	203.8	338.0	165.8	158.1	95.3
1986	236.1	397.8	168.5	169.2	100.4
1987	270.3	459.6	170.0	203.4	119.6
1988	279.7	501.8	179.4	238.0	132.7

(1) COMPENSATION OF EMPLOYEES.
(2) VALUE OF FOREIGN CURRENCY RELATIVE TO THE U.S. DOLLAR.

SOURCE: U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, JUNE 1989.

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